

New U.S. Application
PRELIMINARY AMÉNDMENT

PATENT
DT01 Rec'd PCT/PTC 17 DEC 2004

IN THE CLAIMS:

Please amend claims 1-14 as shown below in the detailed listing of all claims which are, or were in this application:

1. (Currently amended) Crosslinkable silicone composition useful especially as a varnish which ~~in particular~~ has anti-friction properties, said composition ~~being of the type~~ comprising ~~on the one hand~~ at least two organosilicon species A and B which react with one another in the presence of a catalyst C to allow crosslinking, at least one of these two species ~~consisting of~~ comprising a polyorganosiloxane (POS), and ~~on the other hand~~ at least one particulate component D, ~~characterized in that~~ wherein:

- this composition is ~~of the type~~ crosslinkable by polyaddition;
- the particulate component D is selected from the group comprising powdered (co)polyamides - preferably (co)polyamides 6, 12 and 6/12 - defined as follows:
 - the particles are of substantially rounded shape, and

- the mean particle diameter Φ_{md} is between 0.1 and 200 μm , preferably between 5 and 100 μm and particularly preferably between 10 and 50 μm ;
- it also contains at least one other particulate component E selected from the group comprising powdered silicas having a mean particle diameter Φ_{md} of about 0.1 μm or less, and a BET specific surface area greater than 50 m^2/g , preferably of between 50 and 400 m^2/g and especially of between 150 and 350 m^2/g .
2. (Currently amended) Composition according to claim 1, ~~characterized in that~~ wherein the particulate component D is present in an amount of 0.1 to 20% w/w, based on the total weight of the composition.
3. (Currently amended) Composition according to ~~claim 1 or 2,~~ ~~characterized in that~~ claim 1, wherein the particulate component E is present in an amount of 0.001 to 5% w/w, based on the total weight of the composition.

4. (Currently amended) Composition according to ~~any one of claims 1 to 3, characterized in that~~ claim 1, wherein it comprises:

- (A) 100 parts by weight of at least one polyorganosiloxane (POS) having at least two alkenyl groups, preferably C₂-C₆ alkenyl groups, bonded to the silicon in each molecule;
- (B) 1 to 50 parts by weight of at least one polyorganosiloxane having at least three hydrogen atoms bonded to the silicon in each molecule;
- (C) 0.001 to 1 part by weight of at least one catalyst preferably composed of at least one metal belonging to the platinum group;
- (D) 0.1 to 20 parts by weight of at least one particulate component consisting of (co)polyamide;
- (E) 0.001 to 5 parts by weight of at least one siliceous particulate component;
- (F) 0 to 30 parts by weight of at least one adhesion promoter;
- (G) 0 to 1 part by weight of at least one crosslinking inhibitor;

(H) 0 to 10 parts by weight of at least one polyorganosiloxane resin;

(I) optionally at least one functional additive for imparting specific properties.

5. (Currently amended) Composition according to ~~any one of claims 1 to 4~~, characterized in that claim 1, wherein the dynamic viscosity η (mPa.s at 25°C) of its silicone phase, consisting of the POS A and B and optionally the components H or I, is such that:

$$200 \leq \eta \leq 3000,$$

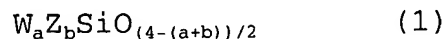
preferably

$$300 \leq \eta \leq 2000,$$

and particularly preferably

$$400 \leq \eta \leq 900.$$

6. (Currently amended) Composition according to ~~any one of claims 1 to 5~~, characterized in that the claim 1, wherein one or more POS A and the optional resins H have siloxy units of the formula



in which:

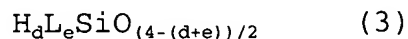
- the symbols W, which are identical or different, are each an alkenyl group and preferably a C₂-C₆ alkenyl;

- the symbols Z, which are identical or different, are each a non-hydrolyzable monovalent hydrocarbon group that is devoid of an unfavorable action on the activity of the catalyst, is optionally halogenated and is preferably selected from alkyl groups having from 1 to 8 carbon atoms inclusive, and from aryl groups;
- a is 1 or 2, b is 0, 1 or 2 and a + b is between 1 and 3;
- optionally at least some of the other units are units of the empirical formula



in which Z is as defined above and c has a value of between 0 and 3.

7. (Currently amended) Composition according to ~~any one of claims 1 to 6, characterized in that the~~ claim 1, wherein one or more POS B have siloxy units of the formula



in which:

- the symbols L, which are identical or different, are each a non-hydrolyzable monovalent hydrocarbon group that is devoid of an unfavorable action on the activity of the

catalyst, is optionally halogenated and is preferably selected from alkyl groups having from 1 to 8 carbon atoms inclusive, and from aryl groups;

- d is 1 or 2, e is 0, 1 or 2 and d + e has a value of between 1 and 3;
- optionally at least some of the other units being units of the empirical formula



in which L is as defined above and g has a value of between 0 and 3.

8. (Currently amended) Composition according to ~~any one of claims 1 to 7, characterized in that~~ claim 1, wherein the alkenyl groups W of the POS A and the optional POS resins H are vinyl groups Vi carried by siloxy units D and optionally M and/or T.

9. (Currently amended) Varnishing process, ~~characterized in that~~ in which the composition according to ~~any one of claims 1 to 8~~ claim 1 is applied, as an anti-friction varnish, to a substrate optionally coated with at least one layer of silicone elastomer.

10. (Currently amended) Process ~~according to claim 9,~~
~~characterized in that it consists essentially in~~ comprising:

- coating ~~the~~ a substrate with the composition according to
~~any one of claims 1 to 8~~ claim 1,
- crosslinking the layer of varnish, optionally with
thermal activation,
- and optionally repeating the above steps at least once.

11. (Currently amended) Process according to ~~claim 9 or 10,~~
~~characterized in that~~ claim 9, wherein the varnish composition is
applied to the substrate at a coating rate less than or equal to 25
g/m² and preferably ~~of~~ between 5 and 20 g/m².

12. (Currently amended) Composite obtainable by the process
according to ~~any one of claims 9 to 11,~~ characterized in that it
comprises claim 9, comprising:

- a substrate,
- optionally a coating firmly fixed to at least one side of
the substrate and ~~consisting of~~ comprising at least one
layer of silicone elastomer,

- at least one layer of varnish based on the composition according to any one of claims 1 to 8 comprising at least two organosilicon species A and B which react with one another in the presence of a catalyst C to allow crosslinking, at least one of these two species comprising a polyorganosiloxane (POS), and at least one particulate component D, wherein:
 - this composition is crosslinkable by polyaddition;
 - the particulate component D is selected from the group comprising powdered (co)polyamides - preferably (co)polyamides 6, 12 and 6/12 - defined as follows:
 - the particles are of substantially rounded shape, and
 - the mean particle diameter Φ_{md} is between 0.1 and 200 μm , preferably between 5 and 100 μm and particularly preferably between 10 and 50 μm ;
 - it also contains at least one other particulate component E selected from the group comprising powdered silicas having a mean particle diameter Φ_{md} of about 0.1 μm or less, and a BET specific surface area greater than 50

m²/g, preferably of between 50 and 400 m²/g and especially of between 150 and 350 m²/g.

13. (Currently amended) Composite according to claim 12, ~~characterized in that~~ wherein the substrate is a flexible substrate preferably selected from the group comprising:

- textiles,
- non-woven fibrous substrates,
- polymer films, particularly polyester and polyamide.

14. (Currently amended) Manufactured article, ~~characterized in that it contains~~ containing the composite according to claim 12 or 13.